

WHAT IS CLAIMED IS

1. A method for fabricating a semi-hermetic scroll compressor comprising:
 - (a) having a plurality of sub-casings with fixing design and lubricant design, the fixing design and the lubricant design being initially configured inside at least one internal surface of the sub-casings;
 - (b) cooperating with the fixing design to compose of at least one fixing device, at least one driving device, at least one compressing device and a partition device in the plural sub-casings;
 - (c) fastening the plural sub-casings together;
 - (d) finishing the method.
2. The method for fabricating the semi-hermetic scroll compressor as cited in claim 1, wherein the sub-casings include an upper casing and a lower casing, the upper casing further includes a high-pressure device and the partition device, the lower casing further includes the fixing design, the lubricant design, the fixing device, the driving device, the compressing device and a lubricant device.
3. The method for fabricating the semi-hermetic scroll compressor as cited in claim 2, wherein the high-pressure device is a high-pressure chamber with immersed type.
4. The method for fabricating the semi-hermetic scroll compressor as cited in claim 2, wherein the partition device is a partition plate.
5. The method for fabricating the semi-hermetic scroll compressor as cited in claim 2, wherein the fixing design as standard height for positioning mainly includes a fixing bearing base portion and a fixing bearing portion.
6. The method for fabricating the semi-hermetic scroll compressor as cited in claim 2, wherein the lubrication design includes at least one lubricant channel, which is to bring lubricant back to the lubricant device.
7. The method for fabricating the semi-hermetic scroll compressor as cited in claim 2, wherein the fixing device mainly includes an upper bearing, a main bearing, a lower bearing, a brace and a bearing base.
8. The method for fabricating the semi-hermetic scroll compressor as cited in claim 2, wherein the driving device mainly includes a drive shaft, a motor stator and a motor rotor.

9. The method for fabricating the semi-hermetic scroll compressor as cited in claim 2, wherein the compressing device mainly includes a fixed scroll member and an orbiting scroll member.
10. The method for fabricating the semi-hermetic scroll compressor as cited in claim 2, wherein
5 the lubricant device is a lubricant tank.
11. The method for fabricating the semi-hermetic scroll compressor as cited in claim 2, wherein the sub-casings further include an upper counterweight, a lower counterweight and a discharging port.
12. The method for fabricating the semi-hermetic scroll compressor as cited in claim 1, wherein
10 the sub-casings include an upper casing, a middle casing and a lower casing, the upper casing further includes a high-pressure device and the partition device, the middle casing further includes the fixing design, the lubricant design, the fixing device, the driving device and the compressing device, the lower casing further includes the fixing device, the lubricant design, the fixing design and a lubricant device.
13. The method for fabricating the semi-hermetic scroll compressor as cited in claim 12, wherein
15 the high-pressure device is a high-pressure chamber with immersed type.
14. The method for fabricating the semi-hermetic scroll compressor as cited in claim 12, wherein the partition device is a partition plate.
15. The method for fabricating the semi-hermetic scroll compressor as cited in claim 12, wherein
20 the fixing design as standard height for positioning mainly includes a radial fixing scroll member portion, an axial fixing scroll member portion, a fixing motor portion and a fixing bearing portion.
16. The method for fabricating the semi-hermetic scroll compressor as cited in claim 12, wherein
25 the lubricant design includes at least one lubricant channel, which is to bring lubricant back to the lubricant device.
17. The method for fabricating the semi-hermetic scroll compressor as cited in claim 12, wherein the fixing device mainly includes an upper bearing, a main bearing and a lower bearing.
18. The method for fabricating the semi-hermetic scroll compressor as cited in claim 12, wherein the driving device mainly includes a motor stator, a motor rotor and a drive shaft.
19. The method for fabricating the semi-hermetic scroll compressor as cited in claim 12, wherein
30 the compressing device mainly includes a fixed scroll member and an orbiting scroll member.

20. The method for fabricating the semi-hermetic scroll compressor as cited in claim 12, wherein the lubricant device is a lubricant tank.
21. The method for fabricating the semi-hermetic scroll compressor as cited in claim 12, wherein the sub-casings further include an upper counterweight, a lower counterweight and a discharging port.
22. A structure for fabricating a semi-hermetic scroll compressor comprising:
- a plurality of sub-casings with fixing design and lubricant design, the fixing design and the lubricant design being initially configured inside at least one internal surface of the sub-casings;
 - at least one fixing device being equipped in the sub-casings and cooperating with the fixing design for positioning;
 - at least one driving device being equipped in at least one lower sub-casing of the sub-casings and positioned by the fixing design and the fixing device;
 - at least one compressing device being equipped in at least one upper sub-casing of the sub-casings and positioned by the fixing design and the fixing device, further that, the compressing device being driven by the driving device;
 - a partition device being equipped in at least one upper sub-casing of the sub-casings for separation.
23. The structure for fabricating the semi-hermetic ~~vortex~~ scroll compressor as cited in claim 22, wherein the sub-casings include:
- an upper casing, which includes a high-pressure device and the partition device;
 - a lower casing, which includes the fixing design, the lubricant design, the fixing device, the driving device, the compressing device and a lubricant device;
- wherein the driving device drives the compressing device to generate high-pressure vapor refrigerant into the high-pressure device separated by the partition device, the lubricant device in a bottom of the lower casing pumps some lubricant to lubricate while the driving device being in motion.
24. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 23, wherein the high-pressure device is a high-pressure chamber with immersed type.
25. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 23,

wherein the partition device is a partition plate.

26. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 23, wherein the fixing design as standard height for positioning mainly includes a fixing bearing base portion and a fixing bearing portion.

5 27. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 23, wherein the lubrication design includes at least one lubricant channel, which is to bring lubricant back to the lubricant device.

10 28. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 23, wherein the fixing device mainly includes an upper bearing, a main bearing, a lower bearing, a brace and a bearing base.

29. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 23, wherein the driving device mainly includes a drive shaft, a motor stator and a motor rotor.

15 30. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 23, wherein the compressing device mainly includes a fixed scroll member and an orbiting scroll member.

31. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 23, wherein the lubricant device is a lubricant tank.

20 32. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 23, wherein the sub-casings further include an upper counterweight, a lower counterweight and a discharging port.

33. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 22, wherein the sub-casings include:

an upper casing, which includes a high-pressure device and the partition device;

25 a middle casing, which includes the fixing design, the lubricant design, the fixing device, the driving device and the compressing device;

a lower casing, which includes the fixing device, the lubricant design, the fixing design and a lubricant device;

30 wherein the driving device drives the compressing device to generate high-pressure vapor refrigerant into the high-pressure device separated by the partition device, the lubricant device in a bottom of the lower casing pumps some lubricant to lubricate while the driving

device being in motion.

34. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 33, wherein the high-pressure device is a high-pressure chamber with immersed type.

5 35. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 33, wherein the partition device is a partition plate.

36. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 33, wherein the fixing design as standard height for positioning mainly includes a radial fixing scroll member portion, an axial fixing scroll member portion, a fixing motor portion and a fixing bearing portion.

10 37. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 33, wherein the lubricant design includes at least one lubricant channel, which is to bring lubricant back to the lubricant device.

15 38. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 33, wherein the fixing device mainly includes an upper bearing, a main bearing and a lower bearing.

39. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 33, wherein the driving device mainly includes a drive shaft, a motor stator and a motor rotor.

20 40. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 33, wherein the compressing device mainly includes a fixed scroll member and an orbiting scroll member.

41. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 33, wherein the lubricant device is a lubricant tank.

25 42. The structure for fabricating the semi-hermetic scroll compressor as cited in claim 33, wherein the sub-casings further include an upper counterweight, a lower counterweight and a discharging port.

43. The method for fabricating the semi-hermetic scroll compressor as cited in claim 1, wherein step (c) fastening the plural sub-casings together is to adopt bolts and nuts to tighten, thus the sub-casings can be disassembled for maintenance services.